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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,058	03/30/2001	Tatsuya Suzuki	NECZ 18.544	8996

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EXAMINER

MOORE, KARLA A

ART UNIT	PAPER NUMBER
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1763

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DATE MAILED: 08/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,058

Applicant(s)

SUZUKI, TATSUYA

Examiner

Karla Moore

Art Unit

1763

A8-5

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-14 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 5 and 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claim 9 is objected to because of the following informalities: Claim 9 is exactly the same as claim
8. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
3. Claims 1-4, 6-10, 12-14 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No 5,346,518 to Baseman et al.
4. Baseman et al. disclose a semiconductor substrate/stock vessel (40, Figure 6A), which is an openable/closeable (column 16, rows 39-42) vessel used in a semiconductor device manufacturing process and adapted to store or transfer a semiconductor substrate (12) (abstract), wherein said vessel incorporates at least one adsorbent made of active carbon and capable of adsorbing and organic substance, and is mounted detachably (30; column 8, rows 5-7 and 43-45; column 19, rows 44-46). The vessel incorporates a semiconductor substrate carrier (48) having a plurality of slots (52), each capable of holding one semiconductor substrate, so that a plurality of semiconductor substrates are stored while being held by said semiconductor carrier.
5. Baseman et al. further teach that the adsorbent is a silicon wafer with a surface coated with an adsorbing agent, such as active carbon (Figure 4, column 9, rows 41-46).
6. In addition to being mounted in an empty slot of said semiconductor substrate carrier, the adsorbent of Basemen et al. may also be mounted in a space defined between an inner wall of said stock/transfer vessel and an outer wall of said semiconductor substrate carrier.

7. With respect to claim 10, 12-14 and 16-18, Baseman et al. teach that the above described apparatus may be used in a method of manufacturing a semiconductor device wherein a semiconductor substrate is stored in the stock/transfer vessel incorporating at least one adsorbent capable of adsorbing an organic substance during an operation wait time between respective steps of manufacturing said semiconductor device, said adsorbent being mounted detachably (abstract).

Claim Rejections - 35 USC § 103

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8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baseman et al as applied to claims ^{1-4, 6-10, 12-14, 16-18} further in view of U.S. Patent No. 6,093,947 to Hanafi et al.

9. Baseman et al. disclose the invention substantially as claimed.

10. However, Baseman et al. fail to teach a method of manufacturing a substrate, wherein the steps of manufacturing said semiconductor device include the step of forming a gate oxide film, the step of forming a polysilicon film and the step of forming a contact hole.

11. Hanafi et al. teach a process for manufacturing a semiconductor wafer, wherein the steps include forming a gate oxide film, forming a polysilicon film and forming a contact hole (column 2, rows 30-45). Hanafi et al. further teach that care should not to introduce contaminants onto the film by transferring in a vacuum or an inert vacuum.

12. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have used the vessel of Baseman et al. in a manufacturing process, which includes the steps of forming a gate oxide film, a polysilicon film and a contact hole, in order to prevent contamination as taught by Hanafi et al.

Allowable Subject Matter

13. Claims 5 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
14. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach or fairly suggest the inventions of claims 5 and 15 wherein the adsorbent is a silicon wafer with a surface having a Si-F bond.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 703.305.3142. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.
- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 703.308.1633. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9310 for regular communications and 703.872.9311 for After Final communications.
- Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.

km
August 13, 2002


GREGORY MILLS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700